<u>REMARKS/ARGUMENTS</u>

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1-18 are currently pending, Claims 1, 8-10, 13, 15, 16, and 18 having been amended. The changes and additions to the claims do not add new matter and are supported by the originally filed specification, for example, on original Claim 9.

In the outstanding Office Action, Claims 7 and 18 were rejected under 35 U.S.C. §101 as being directed to non-statutory subject matter; Claims 1-18 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite; Claims 1-15 and 18 were rejected under 35 U.S.C. §103(a) as being unpatentable over Lee (U.S. Pub. No. 2002/0080827) in view of Candelore (U.S. Pub No. 2005/0169473).

With respect to the rejection of Claim 7 under 35 U.S.C. §101, Applicants respectfully traverse this ground of rejection. The Office Action takes the position that it is unclear how a device that is intended to communicate via the Internet can do so without an IP address (see Office Action at page 2, section 7). However, Claim 7 does not recite a device intending to "communicate via the Internet." Claim 7 recites "a device which is connected between the Internet and the terminal and has no IP address." Applicants respectfully submit that a device which is connected between the Internet and the terminal may have no IP address. For example, a bridge, which is at the Date Link layer of the OSI Reference Model, has no IP address but can be connected between the Internet and a terminal. In a non-limiting example, a packet cryptographic processing proxy apparatus is implemented on a bridge (see specification, at page 30, lines 20-24). Therefore, Applicants respectfully request that this rejection be withdrawn.

With respect to the rejection of Claim 18 under 35 U.S.C. §101, Applicants respectfully submit that the amendment to the specification overcomes this ground of

rejection. The specification has been amended to clarify that "the packet cryptographic processing substitution program can be installed in the computer from a recording medium such as a CD-ROM, a magnetic disk and a semiconductor storage device or <u>the program can be</u> downloaded to the computer via communication line into the computer." No new matter has been added. The amendment to the specification makes it clear that a recording medium is not being defined as a communication line. Therefore, Applicants respectfully submit that this ground of rejection be withdrawn.

With respect to the rejection of Claims 1-18 under 35 U.S.C. §112, second paragraph, some minor informalities have been corrected. However, the claims are not generally narrative and indefinite. It is noted that the claims may include functional language, which must be considered (see MPEP §2114). Therefore, Applicants respectfully submit that this ground of rejection be withdrawn. If the Examiner does not withdraw the rejection, then Applicants respectfully request that the Examiner specify the language in the claims that is considered unclear and indefinite.

With respect to the rejection of Claim 1 under 35 U.S.C. §103(a), Applicants respectfully submit that the amendment to Claim 1 overcomes this ground of rejection. Amended Claim 1 recites, *inter alia*,

> a cryptographic communication channel information storage part which stores cryptographic communication channel information used for establishing a cryptographic communication channel at least for packet communication on the Internet, in packet communication between a counterpart apparatus connected to the Internet and the terminal;

> a cryptographic processing part which performs cryptographic processing for a received packet which is forwarded from the counterpart apparatus to the terminal or from the terminal to the counterpart apparatus, based on the cryptographic communication channel information stored in said cryptographic communication channel information storage part;

> a packet determination part which determines from the received packet whether or not to agree with the counterpart apparatus on cryptographic communication channel information for establishing a packet communication channel between the counterpart apparatus and the terminal; and
>
> a cryptographic communication channel information agreement part which, if the packet determination determines necessity of agreement, makes the agreement and stores the agreed cryptographic communication channel information in said cryptographic communication channel information storage part.

Applicants respectfully submit that Lee and Candelore, taken alone or in proper combination, fail to disclose or suggest these features of amended Claim 1.

Lee is directed towards a buried data stream in a wireless home network. Figure 2 of Lee shows a gateway 100 that provides access to the Internet 10, external television and radio sources 12 to various appliances 180-188 in a house 20 (see para. [0045] of Lee). Gateway 100 includes a wireless transceiver 170 for transmitting data to appliances 180-188 (see para. [0057]). Gateway 100 also includes encryption/decryption unit 160 for encrypting data that is transmitted wirelessly to the appliances 180-188 and for decrypting data received from appliances 180-188. In other words, encryption/decryption unit 160 provides a cryptographic channel over the wireless network *between the appliances and the gateway*, but it does not provide a cryptographic channel between the appliances and a counterpart device on the Internet.

Thus, Lee fails to disclose or suggest a cryptographic communication channel information storage part which stores cryptographic communication channel information used for establishing a cryptographic communication channel at least for packet communication on the Internet, in packet communication between a counterpart apparatus connected to the Internet and the terminal, as defined by Claim 1.

Candelore is directed towards a method of encrypting a digital television signal. Figure 2 of Candelore shows a set-top box (36 or 136) and Figure 6 shows a gateway set-top box (STB) 400. The Office Action takes the position that a set-top box described in Candelore corresponds to a gateway that receives encrypted data from the network or content provider and process it with respect to the home appliance. However, Candelore describes that the set-top box is connected to a cable TV network (see 32 in Figure 2), which is different from the Internet.

Therefore, Candelore fails to remedy the deficiencies of Lee with regards to Claim 1 as discussed above.

Thus, the combination of Lee and Candelore fails to disclose or suggest a cryptographic communication channel information storage part which stores cryptographic communication channel information used for establishing a cryptographic communication channel at least for packet communication on the Internet, in packet communication between a counterpart apparatus connected to the Internet and the terminal, as defined by Claim 1.

The Office Action also relies on Candelore to remedy the deficiencies of Lee and disclose "a packet determination part which determines from the received packet whether or not to agree with the counterpart apparatus on cryptographic communication channel information for establishing a packet communication channel between the counterpart apparatus and the terminal." (See Office Action at page 7, citing Figure 5 and para. [0055] of Candelore).

However, Figure 5 and paragraph [0055] of Candelore only describe determining whether the packet is clear, encrypted under CA system A or encrypted under DRM system B. In other words, Candelore describes determining whether a packet is unencrypted or encrypted by a specific system. This is not the same as a determining from a received packet whether or not to form an agreement with a counterpart apparatus on cryptographic

communication channel information for establishing a packet communication channel

between the counterpart apparatus and the terminal.

Therefore, <u>Candelore</u> fails to remedy the deficiencies of <u>Lee</u> with regards to the

above-noted feature. Thus, the combination of <u>Lee</u> and <u>Candelore</u> fails to disclose or suggest

a packet determination part as defined in amended Claim 1.

The Office Action also relies on <u>Candelore</u> to remedy the deficiencies of <u>Lee</u> and

disclose a "cryptographic communication channel information agreement part which, if the

packet determination determines necessity of agreement, makes the agreement and stores the

agreed cryptographic communication channel information in said cryptographic

communication channel information storage part." (See Office Action at page 7, citing para.

[0043] of <u>Candelore</u>). However, paragraph [0043] of <u>Candelore</u> only describes that the

authorized set-top boxes receive Entitlement Control Messages (ECM) and attempts to apply

the key obtained from the ECM to the content regardless of the determination of a packet

determination part.

Therefore, <u>Candelore</u> fails to remedy the deficiencies of <u>Lee</u> with regards to the

above-noted feature.

Therefore, the combination of <u>Lee</u> and <u>Candelore</u> fails to disclose or suggest a

communication channel information agreement part which, *if the packet determination*

determines necessity of agreement, makes the agreement and stores the agreed cryptographic

communication channel information in said cryptographic communication channel

information storage part, as defined by amended Claim 1.

Thus, Applicants respectfully submit that amended Claim 1 (and all associated

dependent claims) patentably distinguishes over <u>Lee</u> and <u>Candelore</u>, either alone or in proper

combination.

Amended independent Claim 13 recites features similar to those of amended Claim 1. Therefore, Applicants respectfully submit that Claim 13 (and all associated dependent claims) patentably distinguishes over Lee and Candelore, either alone or in proper combination.

With respect to the rejection of dependent Claim 2 under 35 U.S.C. §103(a), Applicants respectfully traverse this ground of rejection. The Office Action takes the position that Lee describes the claimed filter information storage part on Figure 2 and paragraph [0051]. However, paragraph [0051] of Lee only describes that fire wall section 130 protects the house environment against undesired electronic intrusion through the WAN interface section 110. The fire wall section 130 of Lee does not determine whether or not to perform cryptographic processing. Therefore, Lee fails to disclose or suggest a filter information storage part which stores sending source identification information, sending destination identification information, protocol information indicating a packet communication procedure and *processing instruction information indicating whether or not to perform cryptographic processing*, as filter information, as defined by Claim 2.

Additionally, because Lee fails to disclose the claimed filter information storage part, Lee also fails to disclose or suggest a cryptographic processing determination part which, *by referring to said filter information storage part* based on filter information in the packet received by the packet cryptographic processing apparatus, determines whether or not to perform cryptographic processing of the received packet by said cryptographic processing part based on the processing instruction information, as defined by Claim 2.

Candelore has been considered but fails to remedy the deficiencies of Lee with regards to Claim 2.

Thus, Applicants respectfully submit that Claim 2 patentably distinguishes over Lee and Candelore, either alone or in proper combination, for at least the foregoing reasons.

Dependent Claim 14 recites features similar to Claim 2, therefore Applicants respectfully submit that Claim 14 patentably distinguishes over Lee and Candelore, either alone or in proper combination, for at least the reasons discussed above with regards to Claim 2.

With respect to the rejection of dependent Claim 3 under 35 U.S.C. §103(a), Applicants respectfully traverse this ground of rejection. The Office Action relies on Candelore to remedy the deficiencies of Lee and disclose "a received packet determination part which determines whether or not a received packet from the counterpart apparatus which is forwarded to the terminal is valid." (See Office Action at page 5). Fig. 5 and paragraph [0055] of Candelore only describe determining whether the packet is clear, encrypted under CA system A or encrypted under DRM system B. However, Candelore fails to disclose or suggest a received packet determination part which determines whether or not a received packet from the counterpart apparatus which is forwarded to the terminal is valid, as defined by Claim 3.

Therefore, Candelore fails to remedy the deficiencies of Lee with regards to Claim 3.

Thus, Applicants respectfully submit that Claim 3 patentably distinguishes over Lee and Candelore, either alone or in proper combination, for at least the foregoing reasons.

With respect to the rejection of dependent Claim 4 under 35 U.S.C. §103(a), Applicants respectfully traverse this ground of rejection. The Office Action relies on Candelore to remedy the deficiencies of Lee and disclose that the use of a smart card in Candelore corresponds to the claimed "detachable, tamper-proof device in which at least part of the cryptographic communication channel information is stored," as defined by Claim 4 (see pages 5-6 of the Office Action, citing para. [0022] of Candelore). However, Candelore does not disclose that the smart card includes a part of the cryptographic communication channel information, as defined by Claim 4.

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Therefore, <u>Candelore</u> fails to remedy the deficiencies of <u>Lee</u> with regards to Claim 4.

Thus, Applicants respectfully submit that Claim 4 patentably distinguishes over <u>Lee</u> and <u>Candelore</u>, either alone or in proper combination, for at least the foregoing reasons.

With respect to the rejection of dependent Claim 8 under 35 U.S.C. §103(a), Applicants respectfully traverse this ground of rejection. The Office Action takes the position that <u>Lee</u> describes a terminal information collection part which collects the filter information and stores the information in said filter information storage part (see Office Action, at page 7, section 25, citing para. [0051] of <u>Lee</u>). Paragraph [0051] of <u>Lee</u> only describes that the fire wall section 130 protects the house environment against undesired electronic intrusion through the WAN interface section 110. However, <u>Lee</u> does not describe that the fire wall section 130 stores a part of at least one of the cryptographic communication channel information and the filter information, as defined by Claim 8.

<u>Candelore</u> has been considered but fails to remedy the deficiencies of <u>Lee</u> with regards to Claim 8.

Thus, Applicants respectfully submit that Claim 8 patentably distinguishes over <u>Lee</u> and <u>Candelore</u>, either alone or in proper combination, for at least the foregoing reasons.

With respect to the rejection of dependent Claims 9-11 under 35 U.S.C. §103(a), Applicants respectfully traverse this ground of rejection. The Office Action takes the position that <u>Candelore</u> remedies the deficiencies of <u>Lee</u> and describes a key information setting part, as defined in Claim 9 (see Office Action, at page 7, citing para. [0043] of <u>Candelore</u>). Paragraph [0043] of <u>Candelore</u> only describes that the set-top box attempts to apply keys to the content. However, <u>Candelore</u> fails to disclose or suggest a key information setting part which sets key information for performing cryptographic processing of a packet, in the cryptographic communication channel information agreed by said cryptographic communication channel information agreement part, for the terminal, as defined by Claim 9.

Therefore, <u>Candelore</u> fails to remedy the deficiencies of <u>Lee</u> with regards to Claim 9.

Thus, Applicants respectfully submit that Claim 9 (and all associated dependent claims) patentably distinguishes over <u>Lee</u> and <u>Candelore</u>, either alone or in proper combination, for at least the foregoing reasons.

Dependent Claim 16 recites features similar to those of Claim 9. Thus, Applicants respectfully submit that Claim 16 patentably distinguishes over <u>Lee</u> and <u>Candelore</u>, either alone or in proper combination, for at least the reasons discussed above with regards to Claim 9.

With respect to the rejection of dependent Claim 12 under 35 U.S.C. §103(a), Applicants respectfully traverse this ground of rejection. The Office Action takes the position that <u>Lee</u> describes a terminal information acquisition part, as defined in Claim 12 (see Office Action, at page 8, citing para. [0057] of <u>Lee</u>). Paragraph [0057] of <u>Lee</u> only describes a communication method of wireless transmitter 170. However, <u>Lee</u> fails to disclose or suggest a terminal information acquisition part which detects the terminal, acquires address information from the terminal and stores the acquired address information in said filter information storage part, as defined by Claim 12.

<u>Candelore</u> has been considered but fails to remedy the deficiencies of <u>Lee</u> with regards to Claim 12.

Thus, Applicants respectfully submit that Claim 12 patentably distinguishes over <u>Lee</u> and <u>Candelore</u>, either alone or in proper combination, for at least the foregoing reasons.

With respect to the rejection of dependent Claim 17 under 35 U.S.C. §103(a), Applicants respectfully traverse this ground of rejection. The Office Action takes the position that <u>Candelore</u> remedies the deficiencies of <u>Lee</u> and describes performing the claimed determination about whether valid cryptographic communication channel information is stored in the cryptographic communication channel information storage part (see Office

Action at page 10, citing Fig. 5 and para. [0055] of <u>Candelore</u>). Fig. 5 and paragraph [0055] of <u>Candelore</u> only describe determining whether a packet is clear, encrypted under CA system A or encrypted under DRM system B. However, <u>Candelore</u> fails to disclose or suggest that if the address information is stored, performing the determination about whether valid cryptographic communication channel information is stored in the cryptographic communication channel information storage part, as defined by Claim 17.

Therefore, <u>Candelore</u> fails to remedy the deficiencies of <u>Lee</u> with regards to Claim 17.

Thus, Applicants respectfully submit that Claim 17 patentably distinguishes over <u>Lee</u> and <u>Candelore</u>, either alone or in proper combination, for at least the foregoing reasons.

Consequently, in light of the above discussion and in view of the present amendment, the outstanding grounds for rejection are believed to have been overcome. The present application is believed to be in condition for formal allowance. An early and favorable action to that effect is respectfully requested.
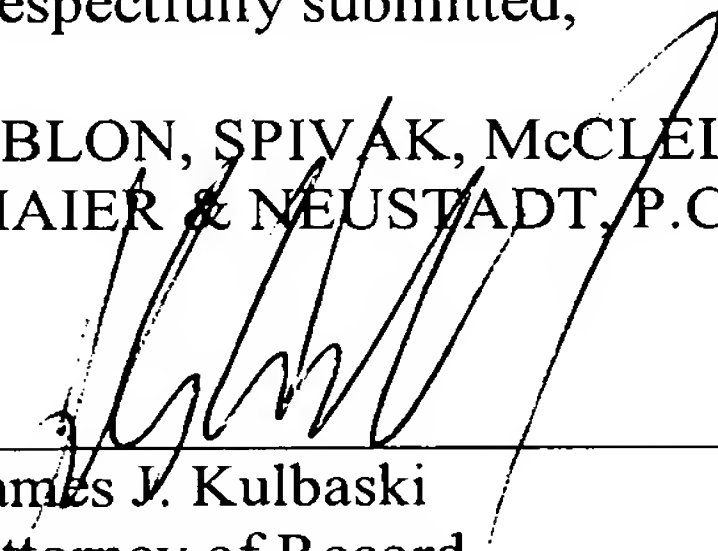
Respectfully submitted,

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